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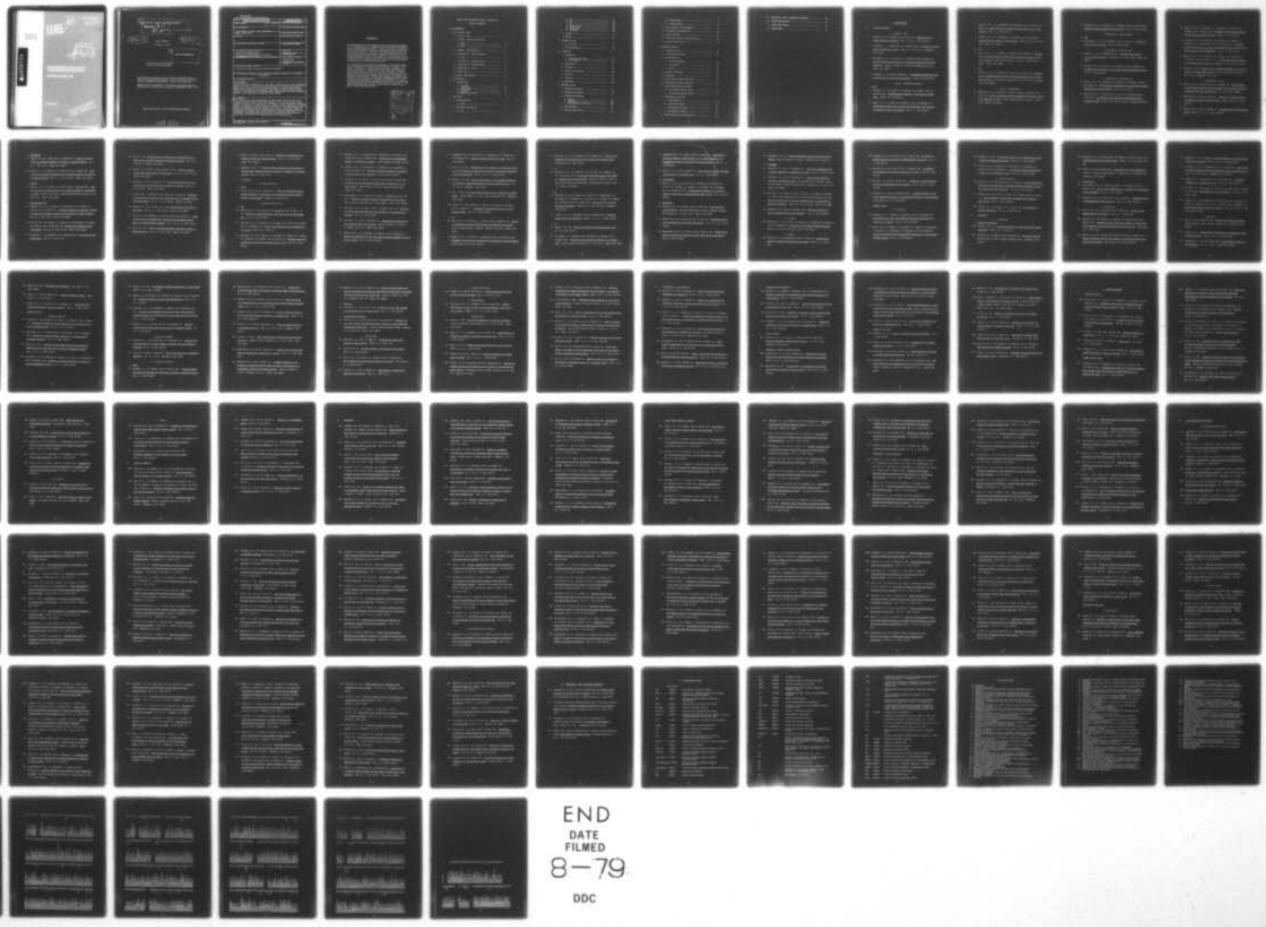

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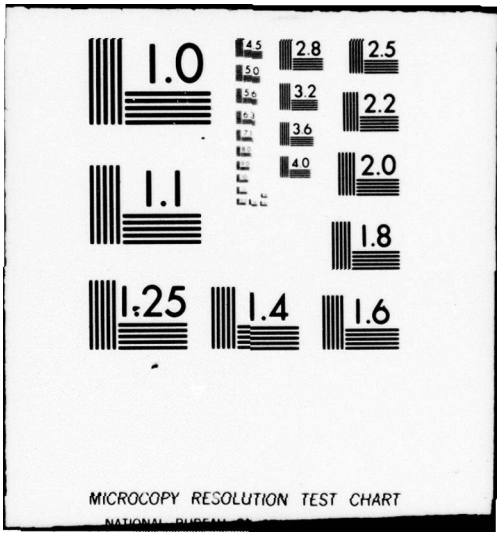
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20. ABSTRACT

This is the Soviet Laser Bibliography for March-April 1978 and is No. 34 in a continuing series on Soviet laser developments. The coverage includes basic research on solid state, liquid, gas, and chemical lasers; components; nonlinear optics; spectroscopy of laser materials; ultrashort pulse generation; theoretical aspects of advanced lasers; and general laser theory. Laser applications are listed under biological effects; communications; beam propagation; computer technology; holography; laser-induced chemical reactions; measurement of laser parameters; laser measurement applications; laser-excited optical effects; beam-target interaction; and plasma generation and diagnostics.

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Introduction

This bibliography has been compiled under an interagency agreement as a continuing effort to document current Soviet-bloc developments in the quantum electronics field. The period covered is March-April 1978, and includes all significant laser-related articles received by us in that interval. The bulk of the entries come from the approximately 30 periodicals which are known to publish the most significant findings in Soviet laser technology. Citations from the Russian Reference Journals are included, as well as entries from the CIRC data base not otherwise covered. Laser items from the popular or semipopular press are generally omitted.

For convenience we have abbreviated frequently cited source names; a source abbreviations list and an author index are included. All sources cited with no parenthetical notation are available at the Library of Congress. A parenthetical entry (RZh, KL), indicates the secondary source in which the citation was found as a bibliographic entry or abstract, but for which the original source is not currently available at the Library. The authors' affiliations are indicated by the numbers in parentheses following the authors' names in the text and are listed in the Author Affiliations List. New affiliations are assigned a new number and are added to a cumulative list which includes all affiliations from 1969 to the present. Only those affiliations which appear in this issue are listed in this issue's Author Affiliations List.

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I. BASIC RESEARCH

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J. BEAM-TARGET INTERACTION

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IV. SOURCE ABBREVIATIONS

	(CIRC Codens)	
APC	(APYCA)	Acta physica et chemica (Szeged)
BAPS	(BAPTA)	Biulletin de l'Academie Polonaise des Sciences. Serie des Sciences Techniques
BWAT	(BWATA)	Biuletyn Wojskowej akademii technicznej J. Dabrowskiego
DAN B	(DBLRA)	Akademiya nauk Belorusskoy SSR. Doklady
DAN SSSR	(DANKA)	Akademiya nauk SSSR. Doklady
DAN Tadzh	(DANTA)	Akademiya nauk Tadzhikskoy SSR. Doklady
DAN Ukr	(DUKAB)	Akademiya nauk Ukrayins'koyi RSR. Dopovidi. Seriya A. Fizyko-matematychni ta tekhnichni nauky
FAiO	(IFAOA)	Akademiya nauk SSSR. Izvestiya. Fizika atmosfery i okeana
FiKhOM	(FKOMA)	Fizika i khimiya obrabotka materialov
FTP	(FTPPA)	Fizika i tekhnika poluprovodnikov
FTT	(FTVTA)	Fizika tverdogo tela
IAN B	(VABFA)	Akademiya nauk Belorusskoy SSR. Izvestiya. Seriya fiziko-tekhnicheskikh nauk
IAN Fiz	(IANFA)	Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya
IT	(IZTEA)	Izmeritel'naya tekhnika
IVUZ Fiz	(IVUFA)	Izvestiya vysshikh uchebnykh zavedeniy. Fizika
IVUZ Mash	(IVUSA)	Izvestiya vysshikh uchebnykh zavedeniy. Mashinostroyeniye
IVUZ Priboro	(IVUBA)	Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye
IVUZ Radioelektr	(IVUZB)	Izvestiya vysshikh uchebnykh zavedeniy. Radioelektronika
IVUZ Radiofiz	(IVYRA)	Izvestiya vysshikh uchebnykh zavedeniy. Radiofizika
KE	(KVEKA)	Kvantovaya elektronika
KhVE	(KHVKA)	Khimiya vysokikh energiy

KL	(KNLTA)	Knizhnaya letopis'
KLDV	(KLDVA)	Knizhnaya letopis'. Dopolnitel'nyy vypusk
KSpF	(KRSFA)	Kratkiye soobshcheniya po fizike
MZhiG	(IMZGA)	Akademiya nauk SSSR. Izvestiya. Mekhanika zhidkosti i gaza
NM	(IVNMA)	Akademiya nauk SSSR. Izvestiya. Neorganicheskiye materialy
OiS	(OPSPA)	Optika i spektroskopiya
OMP	(OPMPA)	Optiko-mekhanicheskaya promyshlennost'
Otkr izobr	(OIPOB)	Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki
PTE	(PRTEA)	Pribory i tekhnika eksperimenta
RiE	(RAELA)	Radiotekhnika i elektronika
RZhF	(RZFZA)	Referativnyy zhurnal. Fizika
RZhGeofiz	(RZGFA)	Referativnyy zhurnal. Geofizika
RZhMekh	(RZMKA)	Referativnyy zhurnal. Mekhanika
RZhMetrolog	(RZMIB)	Referativnyy zhurnal. Metrologiya i izmeritel'naya tekhnika
RZhRadiot	(RZRAB)	Referativnyy zhurnal. Radiotekhnika
Sb1		Sbornik. Vsesoyuznaya konferentsiya "Lazery na osnove slozhnykh organicheskikh soyedineniy i ikh primeneniye". 2nd. Dushanbe, 27-30 September 1977. Tezisy. Minsk, 1977.
Sb2		Vsesoyuznoye soveshchaniye po uskoritelyam zaryazhenykh chastits. 5th. Dubna, 1976. Trudy, v. 2, Moskva, 1977.
Sb3		Shirokopolosnyye usiliteli, no. 5, 1977.
Sb4		Monokristally tugoplavkikh i rezkikh metallov, splavov i soyedineniy. Moskva, 1977.
Sb5		Problemy bioniki, no. 20, 1978.
Sb6		Priborostroyeniye, no. 24, Kiyev, Tekhnika, 1978.
Sb7		Effektivnost' kapital'nykh vlozheniy i novoy tekhniki, no. 2, Cheboksary, 1977.
Sb8		Radiotekhnika, no. 44, 1978.

Sb9		Vsesoyuznaya konferentsiya po generatoram nizkotemperaturnoy plazmy. Materialy, v. 3. Alma-Ata, 1977.
Sb10		International Conference on Phenomena of Ionized Gas. 13th. Berlin, 1977. Proceedings. Contributed Papers. Part 1. Leipzig, 1977.
Sb11		Spektroskopiya fotoprevrashcheniy v molekulakh. Leningrad, 1977.
Sb12		Voprosy prikladnoy matematiki i mekhaniki, no. 3, Alma-Ata, 1976.
Sb13		Vsesoyuznoye soveshchaniye po uskoritelyam zaryazhenykh chastits. 5th. Dubna, 1976. Trudy, v. 1, Moskva, 1977.
Sb14		Vsesoyuznaya shkola-konferentsiya molodykh uchenykh po fizike plazmy "Sovremenyye metody nagreva i diagnostiki plazmy", Khar'kov, 1977. Tezisy dokladov. Khar'kov, 1977.
TKiT	(TKTEA)	Tekhnika kino i televideniya
Tr1		Moskovskiy energeticheskiy institut. Trudy, no. 329, 1977.
Tr2		Belorusskiy universitet. Vestnik, seriya 1, no. 3, 1977.
Tr3		NI tsentr izucheniya prirodnykh resursov. Trudy, no. 4, 1977.
Tr4		Trudy uchebnykh institutov svyazi, no. 85, 1977.
Tr5		VNII metrologii. Sbornik nauchnykh trudov, no. 203(263), 1976.
Tr6		NI tsentr izucheniya prirodnykh resursov. Trudy, no. 3, 1977.
TVT	(TVTYA)	Teplofizika vysokikh temperatur
UFN	(UFNAA)	Uspekhi fizicheskikh nauk
UFZh	(UFIZA)	Ukrainskiy fizicheskiy zhurnal
VAN	(VANSA)	Akademiya nauk SSSR. Vestnik
VMU	(VMUFA)	Moskovskiy universitet. Vestnik. Fizika, astronomiya
ZhETF	(ZEIFA)	Zhurnal eksperimental'noy i teoreticheskoy fiziki
ZhETF P	(ZFPRA)	Pis'ma v Zhurnal eksperimental'noy i teoreticheskoy fiziki
ZhNiPFiK	(ZNPFA)	Zhurnal nauchnoy i prikladnoy fotografii i kinematografii
ZhPMTF	(ZPMFA)	Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki
ZhPS	(ZPSBA)	Zhurnal prikladnoy spektroskopii
ZhTF	(ZTEFA)	Zhurnal tekhnicheskoy fiziki
ZhTF P	(PZTFD)	Pis'ma v Zhurnal tekhnicheskoy fiziki

V. AUTHOR AFFILIATIONS

NS. Non-Soviet
0. Affiliation not given
1. Physics Institute im Lebedev, AN SSSR, Moscow (Fizicheskiy institut AN SSSR).
2. Moscow State University (Moskovskiy gosudarstvennyy universitet).
3. Institute of Physics, AN BSSR, Minsk (Institut fiziki AN BSSR).
4. Physicotechnical Institute im Ioffe, Leningrad (Fiziko-tekhnicheskiy institut im Ioffe).
5. Institute of Physics, AN UkrSSR, Kiev (Institut fiziki AN UkrSSR).
6. Institute of Semiconductors, AN UkrSSR, Kiev (Institut poluprovodnikov AN UkrSSR).
7. State Optical Institute im Vavilov, Leningrad (Gosudarstvennyy opticheskiy institut im Vavilova).
8. Radiophysics Scientific Research Institute at Gorkiy State University (Nauchno-issledovatel'skiy radiofizicheskiy institut pri Gor'kovskom gos universitete).
10. Institute of Semiconductor Physics of the Siberian Branch, AN SSSR, Novosibirsk (Institut fiziki poluprovodnikov SOAN).
12. Leningrad State University (Leningradskiy gos universitet).
14. University of Friendship Among Nations im Lumumba, Moscow (Universitet druzhby narodov im Lumumby).
15. Institute of Radio Engineering and Electronics, AN SSSR, Moscow (Institut radiotekhniki i elektroniki AN SSSR).
16. Moscow Engineering Physics Institute (Moskovskiy inzhenerno-fizicheskiy institut).
17. Institute of Mechanical Problems, AN SSSR, Moscow (Institut problem mekhaniki AN SSSR).
19. Moscow Power Engineering Institute (Moskovskiy energeticheskiy institut).
22. Institute of metallurgy im Baykov, Moscow (Institut metallurgii im Baykova).
23. Institute of Atomic Energy im Kurchatov, Moscow (Institut atomnoy energii im Kurchatova).
24. Moscow Higher Technical College im Bauman (Moskovskoye vyssheye tekhnicheskoye uchilishche im Baumana).
30. Leningrad Institute of Precision Mechanics and Optics (Leningradskiy institut tochnoy mekhaniki i optiki).
34. Khar'kov State University (Khar'kovskiy gos universitet).
35. Khar'kov Institute of Radioelectronics (Khar'kovskiy institut radioelektroniki).
36. Physicotechnical Institute of Low Temperatures, AN UkrSSR, Khar'kov (Fiziko-tekhnicheskiy institut nizkikh temperatur AN UkrSSR).
37. Yerevan State University (Yerevanskiy GU).
38. Kazan' Physicotechnical Institute (Kazanskiy fiziko-tekhnicheskiy institut).
45. Saratov State University (Saratovskiy GU).
49. Vilnius State University (Vil'nyusskiy GU).
50. Institute of Semiconductor Physics, AN LitSSR, Vilnius (Institut fiziki poluprovodnikov AN LitSSR).
51. Kiev State University (Kiyevskiy GU).
59. Institute of Physics Research, AN ArmSSR (Institut fizicheskikh issledovaniy AN ArmSSR).
61. Institute of Physics and Astronomy, AN EstSSR (Institut fiziki i astronomii AN EstSSR).
64. Institute of Atmospheric Physics, AN SSSR (Institut fiziki atmosfery AN SSSR).

65. Institute of Problems of Physics, AN SSSR (Institut fizicheskikh problem AN SSSR).
66. Institute of Solid State Physics, AN SSSR (Institut fiziki tverdogo tela AN SSSR).
67. Institute of Physics of Chemistry, AN SSSR (Institut khimicheskoy fiziki AN SSSR).
72. Institute of Spectroscopy, AN SSSR (Institut spektroskopii AN SSSR).
74. Institute of High Temperatures, AN SSSR (Institut vysokikh temperatur AN SSSR).
75. Institute of Automation and Electronic Measurements, Siberian Branch, AN SSSR (Institut avtomatiki i elektrometrii SOAN).
78. Institute of Atmospheric Optics, Siberian Branch AN SSSR (Institut optiki atmosfery SOAN).
79. Institute of Nuclear Physics, Siberian Branch AN SSSR (Institut yadernoy fiziki SOAN).
84. Institute of Radiophysics and Electronics, AN UkrSSR (Institut radiofiziki i elektroniki AN UkrSSR).
87. Belorussian State University (Belorusskiy GU).
90. Electrotechnical Institute of Communications (Elektrotekhnicheskiy institut svyazi).
94. Gor'kiy State University (Gor'kovskiy GU).
96. State Scientific Research Institute of Photochemical Planning (GOSNIIKhIMFOTOPROYEKT).
98. Institute of Nuclear Physics at Moscow State University (Institut yadernoy fiziki pri Moskovskom GU).
99. Institute of Mechanics and Physics, Saratov (Institut mekhaniki i fiziki).
102. Ivanovo Chemicotechnological Institute (Ivanovovskiy khimiko-tekhnologicheskiy institut).
106. Kiev Polytechnic Institute (Kiyevskiy politekhnicheskiy institut).
114. L'vov State University (L'vovskiy GU).
118. Moscow Physicotechnical Institute (Moskovskiy fiziko-tekhnicheskiy institut).
119. Moscow Institute of Electronic Engineering (Moskovskiy institut elektronnoy tekhniki).
122. Scientific Research Institute of Physicochemistry im. Karpov (NI fiziko-khimicheskiy institut im. Karpova).
134. Central Aerological Observatory (Tsentral'naya aerologicheskaya observatoriya).
136. Uzhgorod State University (Uzhgorodskiy gos. universitet).
140. All Union Scientific Research Institute of Physicotechnical and Radiotechnical Measurements (VNII fiziko-tekhnicheskikh i radiotekhnicheskikh izmereniy, VNIFTRI).
141. All Union Scientific Research Institute of Opticophysical Measurements (VNII optiko-fizicheskikh izmereniy).
147. Moscow Highway Institute (Moskovskiy avtodorozhnyy institut, MADI).
148. Institute of Terrestrial Magnetism, the Ionosphere and Radiowave Propagation, AN SSSR (Institut zemnogo magnetizma, ionosfery i rasprostraneniya radiovoln AN SSSR, IZMIRAN).
161. Moscow Institute of Radio Engineering, Electronics and Automation (Moskovskiy institut radiotekhnika, elektroniki i avtomatiki).
163. All Union Scientific Research Institute of Metrology im. Mendeleyev (VNII metrologii im. Mendeleyeva).

180. Institute of Heat and Mass Exchange, AN BSSR (Institut teplo- i massoobmena AN BSSR).
193. Institute of Theoretical and Applied Mechanics, Siberian Branch, AN SSSR, Novosibirsk (Institut teoreticheskoy i prikladnoy mekhaniki SOAN).
213. Leningrad Technological Institute (Leningradskiy tekhnologicheskiy institut).
215. Physico-technical Institute, AN TadzhSSR (Fiziko-tekhnicheskiy institut AN TadzhSSR).
220. Institute of Experimental Meteorology (Institut eksperimental'noy meteorologii).
242. Kazakh State University, Alma Ata (Kazakhskiy gos. univ.).
297. Institute of Chemistry, AN SSSR, Gor'kiy (Institut khimii AN SSSR).
299. Institute of Electronics, AN BSSR (Institut elektroniki AN BSSR).
303. L'vov Branch of Mathematical Physics of the Institute of Mathematics, AN UkrSSR (L'vovskiy filial matematicheskoy fiziki instituta matematiki AN UkrSSR).
312. Kiev Institute of Civil Aviation Engineers (Kiyevskiy institut inzhenerov grazhdanskoy aviatsii).
317. Saratov Polytechnic Institute (Saratovskiy politekhnicheskiy institut).
334. Scientific Research Institute of Applied Physical Problems at Belorussian State University (NII prikladnykh fizicheskikh problem pri Belorusskom gos. univ.).
335. Institute of Electrochemistry, AN SSSR (Institut elektrokhimi AN SSSR).
336. Scientific Research Institute of Nuclear Physics, Electronics and Automation at Tomsk Polytechnic Institute (NII yadernoy fiziki, elektroniki i avtomatiki pri Tomskom politekhnicheskom institut).
350. Institute of Applied Geophysics, AN SSSR (Institut prikladnoy geofiziki AN SSSR).
385. Chernovtsy Dept. of Material Science of the Institute of Semiconductors, AN UkrSSR (Chernovitskoye otdeleniye materialovedeniya instituta poluprovodnikov AN UkrSSR).
401. Khabarovsk Polytechnic Institute (Khabarovskiy politekhnicheskiy institut).
404. State Scientific Research Center for the Study of Natural Resources (Gos. NI tsentr izucheniya prirodnykh resursov).
414. Institute of Technical Cybernetics, AN BSSR (Institut tekhnicheskoy kibernetiki AN BSSR).
426. Institut of Applied Physics, AN SSSR, Gor'kiy (Institut prikladnoy fiziki AN SSSR).

VI. AUTHOR INDEX